network connections between the computer network interface and the network interfaces of other network nodes.

34. The computer network interface of claim 33, wherein the network status table comprises data representing network status based on data received at a node from other network nodes.

35. The computer network interface of claim 34, wherein the data received at a node from other networked nodes comprises a diagnostic message.

36. The computer network interface of claim 35, wherein the data received at a node from other networked nodes further comprises data representing the ability of the other nodes to receive data from other different network nodes.

37. The computer network interface of claim 33, wherein the network status table comprises data representing network status based on a node's ability to send data to other nodes.

38. The computer network interface of claim 34, wherein the network status table further comprises data representing network status based on a node's ability to send data to other nodes.

39. The computer network interface of claim 32, wherein selecting either the primary network connection or the redundant network connection for communication with each of the other network nodes comprises:

selecting the primary network connection if the state of the primary network connection is determined to be operable; and

selecting the redundant network connection if the state of the primary network connection is determined to be inoperable.

40. The computer network interface of claim 32, wherein selecting either the primary network connection or the redundant network connection for communication with each of the other network nodes comprises:

selecting the primary network connection to transmit data if the state of the primary network connection is determined to be operable to transmit data;

selecting the primary network connection to receive data if the state of the primary network connection is determined to be operable to receive data;

selecting the redundant network connection to transmit data if the state of the primary network connection is determined to be inoperable to transmit data; and

selecting the redundant network connection to receive data if the state of the primary network connection is determined to be inoperable to receive data.

41. The computer network interface of claim 32, wherein selecting a connection for sending and receiving data between each pair of network nodes comprises selecting a connection for sending and receiving data from a first node to one or more connected intermediate nodes, and selecting a connection for sending and receiving data from an intermediate node to a second node.

42. The computer network interface of claim 32, wherein determining the state of connections between each pair of networked nodes comprises determination of whether each node in a pair of networked nodes can send data to the other node and can receive data from the other node in the pair.

43. A machine-readable medium with instructions thereon, the instructions when executed on a computer operable to cause the computer to:

determine the state of a primary network connection between the network interface and the network interfaces of other network nodes;

determine the state of a redundant network connection between the network interface and the network interfaces of other network nodes; and

select either the primary network connection or the redundant network connection for communication with each of the other network nodes, such that the network connection selected is selected independently based on the determined network states for each other network node.

44. The machine-readable medium of claim 43, the instructions further operable to cause a computer to create and maintain a network status table that indicates results of the determination of the state of the primary and redundant network connections between the computer network interface and the network interfaces of other network nodes.

45. The machine-readable medium of claim 44, wherein the created network status table comprises data representing network status based on data received at a node from other network nodes.

46. The machine-readable medium of claim 45, wherein the data received at a node from other networked nodes comprises a diagnostic message.

47. The machine-readable medium of claim 46, wherein the data received at a node from other networked nodes further comprises data representing the ability of the other nodes to receive data from other different network nodes.

48. The machine-readable medium of claim 44, wherein the created network status table comprises data representing network status based on a node's ability to send data to other nodes.

49. The machine-readable medium of claim 45, wherein the network status table further comprises data representing network status based on a node's ability to send data to other nodes.

50. The machine-readable medium of claim 43, wherein selecting either the primary network connection or the redundant network connection for communication with each of the other network nodes comprises:

selecting the primary network connection if the state of the primary network connection is determined to be operable; and

B1

selecting the redundant network connection if the state of the primary network connection is determined to be inoperable.

51. The machine-readable medium of claim 43, wherein selecting either the primary network connection or the redundant network connection for communication with each of the other network nodes comprises:

A1

selecting the primary network connection to transmit data if the state of the primary network connection is determined to be operable to transmit data;

selecting the primary network connection to receive data if the state of the primary network connection is determined to be operable to receive data;

selecting the redundant network connection to transmit data if the state of the primary network connection is determined to be inoperable to transmit data; and

selecting the redundant network connection to receive data if the state of the primary network connection is determined to be inoperable to receive data.

52. The machine-readable medium of claim 43, wherein selecting a connection for sending and receiving data between each pair of network nodes comprises selecting a connection for sending and receiving data from a first node to one or more connected intermediate nodes, and selecting a connection for sending and receiving data from an intermediate node to a second node.

Respectfully submitted,
JIANDONG HUANG, ET AL.

John G. Shudy, Jr., Attorney
Reg. No. 31,214
Honeywell International Inc.
Law Dept. AB2
PO Box 2245
Morristown NJ 07962-9806

Telephone: (612) 951-7086
JGS/ST